

## SEQUENCE LISTING

<110> Mitsuhashi, Tadayoshi

<120> METHODS FOR DETERMINING GENETIC RESISTANCE OF PIGS  
TO DISEASES CAUSED BY RNA VIRUSES

<130> 690107.404USPC

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<150> JP 2002-313076

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<170> PatentIn Ver. 2.1

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<221> CDS

<222> (101)..(2092)

<220>

<221> polyA\_signal

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Met Val Tyr Ser Ser  
1 5

tgt gaa agt aaa gaa cct gat tca gtt tct gca tcc aat cac ctg tta 163  
Cys Glu Ser Lys Glu Pro Asp Ser Val Ser Ala Ser Asn His Leu Leu  
10 15 20

cta aat ggg aat gat gaa ttg gtg gag aaa agt cac aaa aca ggg cct 211  
Leu Asn Gly Asn Asp Glu Leu Val Glu Lys Ser His Lys Thr Gly Pro  
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gag aac aac ctg tac agc cag tac gag gag aaa gtg cggtcc tgc atc 259  
Glu Asn Asn Leu Tyr Ser Gln Tyr Glu Glu Lys Val Arg Pro Cys Ile  
40 45 50

gac ctc atc gac tca ctg cgg gcc ctg ggc gtg gag cag gac ctg gcc		307	
Asp Leu Ile Asp Ser Leu Arg Ala Leu Gly Val Glu Gln Asp Leu Ala			
55	60	65	
ctg ccc gcc atc gcc gtc atc ggg gac cag agt tcg ggc aag agc tcc		355	
Leu Pro Ala Ile Ala Val Ile Gly Asp Gln Ser Ser Gly Lys Ser Ser			
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gtg ctg gag gcc ctg tcg ggg gtc gct ctc ccc aga ggc agc gga att		403	
Val Leu Glu Ala Leu Ser Gly Val Ala Leu Pro Arg Gly Ser Gly Ile			
90	95	100	
gtg aca aga tgc cct ctt gtg ctg aaa ttg aaa aaa ctc gtg aac gaa		451	
Val Thr Arg Cys Pro Leu Val Leu Lys Leu Lys Leu Val Asn Glu			
105	110	115	
gaa gac gaa tgg aag ggc aaa gtc agt tac cgg gac agc gag att gag		499	
Glu Asp Glu Trp Lys Gly Lys Val Ser Tyr Arg Asp Ser Glu Ile Glu			
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ctt tca gat gct tcg cag gtg gaa aag gaa gtc agc gca gcc cag att		547	
Leu Ser Asp Ala Ser Gln Val Glu Lys Glu Val Ser Ala Ala Gln Ile			
135	140	145	
gcc atc gct ggg gaa ggc gtg gga atc agt cat gag cta atc agt ctg		595	
Ala Ile Ala Gly Glu Gly Val Gly Ile Ser His Glu Leu Ile Ser Leu			
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gag gtc agc tcc cct cat gtc cca gat ctg acc ctc ata gac ctt cct		643	
Glu Val Ser Ser Pro His Val Pro Asp Leu Thr Leu Ile Asp Leu Pro			
170	175	180	
ggc atc acc agg gta gct gta ggc aat cag cca tac gac atc gaa tac		691	
Gly Ile Thr Arg Val Ala Val Gly Asn Gln Pro Tyr Asp Ile Glu Tyr			
185	190	195	
cag atc aag tct ctg atc aag aag tac atc tgt aag cag gag acc atc		739	
Gln Ile Lys Ser Leu Ile Lys Lys Tyr Ile Cys Lys Gln Glu Thr Ile			
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Asn Leu Val Val Val Pro Cys Asn Val Asp Ile Ala Thr Thr Glu Ala			
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ctg cgc atg gcc cag gag gtg gac ccc gaa gga gac agg acc atc ggg		835	
Leu Arg Met Ala Gln Glu Val Asp Pro Glu Gly Asp Arg Thr Ile Gly			
230	235	240	245
atc ttg acg aag ccg gat ctg gtg gac aaa ggc act gag gac aag ata		883	
Ile Leu Thr Lys Pro Asp Leu Val Asp Lys Gly Thr Glu Asp Lys Ile			
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gtg gac gtg gcg aga aac ctg gtc ttc cac ctg aag aag ggc tac atg		931	
Val Asp Val Ala Arg Asn Leu Val Phe His Leu Lys Lys Gly Tyr Met			

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gcc aag gcc ctg cag aag gag cag gcc ttc ttt gaa aac cac gca cat Ala Lys Ala Leu Gln Lys Glu Gln Ala Phe Phe Glu Asn His Ala His 295	300	305	1027
ttc agg gat ctt ctg gag gaa ggg cgg gcc acg atc ccc tgc ctg gca Phe Arg Asp Leu Leu Glu Glu Gly Arg Ala Thr Ile Pro Cys Leu Ala 310	315	320	1075
gaa aga ctg acc tct gaa ctc atc atg cac atc tgt aaa act ctg ccc Glu Arg Leu Thr Ser Glu Leu Ile Met His Ile Cys Lys Thr Leu Pro 330	335	340	1123
ctg tta gaa aac caa ata aaa gag agt cac cag aaa ata aca gag gag Leu Leu Glu Asn Gln Ile Lys Glu Ser His Gln Lys Ile Thr Glu Glu 345	350	355	1171
tta cag aag tat ggc tcc gat att cca gag gat gaa agc ggg aag atg Leu Gln Lys Tyr Gly Ser Asp Ile Pro Glu Asp Glu Ser Gly Lys Met 360	365	370	1219
ttt ttt ctg ata gat aaa atc gat gca ttt aat agt gat atc act gct Phe Phe Leu Ile Asp Lys Ile Asp Ala Phe Asn Ser Asp Ile Thr Ala 375	380	385	1267
ttg ata caa gga gag gaa ctg gtg gtg gag tac gag tgt cgg ctg ttt Leu Ile Gln Gly Glu Glu Leu Val Val Glu Tyr Glu Cys Arg Leu Phe 390	395	400	1315
acc aag atg cga aat gag ttc tgc aga tgg agt gct gtg gtt gaa aag Thr Lys Met Arg Asn Glu Phe Cys Arg Trp Ser Ala Val Val Glu Lys 410	415	420	1363
aat ttc aaa aat ggt tat gac gcc ata tgt aaa caa atc cag ctc ttc Asn Phe Lys Asn Gly Tyr Asp Ala Ile Cys Lys Gln Ile Gln Leu Phe 425	430	435	1411
gaa aat cag tac agg ggg aga gag ttg cca ggg ttt gtg aat tat aag Glu Asn Gln Tyr Arg Gly Arg Glu Leu Pro Gly Phe Val Asn Tyr Lys 440	445	450	1459
aca ttt gaa acc atc att aag aag cag gtc agt gtc ctg gaa gag cca Thr Phe Glu Thr Ile Ile Lys Lys Gln Val Ser Val Leu Glu Glu Pro 455	460	465	1507
gcc gtg gac atg ctg cac aca gtg act gat tta gtc cgg ctc gcc ttc Ala Val Asp Met Leu His Thr Val Thr Asp Leu Val Arg Leu Ala Phe 470	475	480	1555
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aca gat gtt tca gaa aca aat ttt aat gaa ttt ttc aac ctc cac aga 1603  
 Thr Asp Val Ser Glu Thr Asn Phe Asn Glu Phe Phe Asn Leu His Arg  
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act gcc aag tcc aaa att gaa gac att aaa tta gaa caa gaa aaa gaa 1651  
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gct gag acg tcg atc cgg ctc cac ttc caa atg gag cag atc gtg tac 1699  
 Ala Glu Thr Ser Ile Arg Leu His Phe Gln Met Glu Gln Ile Val Tyr  
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 Cys Gln Asp Gln Val Tyr Arg Gly Ala Leu Gln Lys Val Arg Glu Lys  
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cct ctg atc atc cag ttc ttc atc ctc cgg acc ttt ggg cag cag ctg 1939  
 Pro Leu Ile Ile Gln Phe Phe Ile Leu Arg Thr Phe Gly Gln Gln Leu  
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ctc ctg agg gag cgc agt gac acc agc gac aag agg aag ttc ctg aag 2035  
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 Pro Gly

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 35 40 45  
 Val Arg Pro Cys Ile Asp Leu Ile Asp Ser Leu Arg Ala Leu Gly Val  
 50 55 60  
 Glu Gln Asp Leu Ala Leu Pro Ala Ile Ala Val Ile Gly Asp Gln Ser  
 65 70 75 80  
 Ser Gly Lys Ser Ser Val Leu Glu Ala Leu Ser Gly Val Ala Leu Pro  
 85 90 95  
 Arg Gly Ser Gly Ile Val Thr Arg Cys Pro Leu Val Leu Lys Leu Lys  
 100 105 110  
 Lys Leu Val Asn Glu Glu Asp Glu Trp Lys Gly Lys Val Ser Tyr Arg  
 115 120 125  
 Asp Ser Glu Ile Glu Leu Ser Asp Ala Ser Gln Val Glu Lys Glu Val  
 130 135 140  
 Ser Ala Ala Gln Ile Ala Ile Ala Gly Glu Gly Val Gly Ile Ser His  
 145 150 155 160  
 Glu Leu Ile Ser Leu Glu Val Ser Ser Pro His Val Pro Asp Leu Thr  
 165 170 175  
 Leu Ile Asp Leu Pro Gly Ile Thr Arg Val Ala Val Gly Asn Gln Pro  
 180 185 190  
 Tyr Asp Ile Glu Tyr Gln Ile Lys Ser Leu Ile Lys Lys Tyr Ile Cys  
 195 200 205  
 Lys Gln Glu Thr Ile Asn Leu Val Val Val Pro Cys Asn Val Asp Ile

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225	230	235
Asp Arg Thr Ile Gly Ile Leu Thr Lys Pro Asp Leu Val Asp Lys Gly		
245	250	255
Thr Glu Asp Lys Ile Val Asp Val Ala Arg Asn Leu Val Phe His Leu		
260	265	270
Lys Lys Gly Tyr Met Ile Val Lys Cys Arg Gly Gln Gln Asp Ile Gln		
275	280	285
Glu Gln Leu Ser Leu Ala Lys Ala Leu Gln Lys Glu Gln Ala Phe Phe		
290	295	300
Glu Asn His Ala His Phe Arg Asp Leu Leu Glu Glu Gly Arg Ala Thr		
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Ile Pro Cys Leu Ala Glu Arg Leu Thr Ser Glu Leu Ile Met His Ile		
325	330	335
Cys Lys Thr Leu Pro Leu Leu Glu Asn Gln Ile Lys Glu Ser His Gln		
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Lys Ile Thr Glu Glu Leu Gln Lys Tyr Gly Ser Asp Ile Pro Glu Asp		
355	360	365
Glu Ser Gly Lys Met Phe Phe Leu Ile Asp Lys Ile Asp Ala Phe Asn		
370	375	380
Ser Asp Ile Thr Ala Leu Ile Gln Gly Glu Glu Leu Val Val Glu Tyr		
385	390	395
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Glu Cys Arg Leu Phe Thr Lys Met Arg Asn Glu Phe Cys Arg Trp Ser		
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Ala Val Val Glu Lys Asn Phe Lys Asn Gly Tyr Asp Ala Ile Cys Lys		
420	425	430
Gln Ile Gln Leu Phe Glu Asn Gln Tyr Arg Gly Arg Glu Leu Pro Gly		
435	440	445
Phe Val Asn Tyr Lys Thr Phe Glu Thr Ile Ile Lys Lys Gln Val Ser		
450	455	460
Val Leu Glu Glu Pro Ala Val Asp Met Leu His Thr Val Thr Asp Leu		
465	470	475
480		
Val Arg Leu Ala Phe Thr Asp Val Ser Glu Thr Asn Phe Asn Glu Phe		
485	490	495
Phe Asn Leu His Arg Thr Ala Lys Ser Lys Ile Glu Asp Ile Lys Leu		

500

505

510

Glu Gln Glu Lys Glu Ala Glu Thr Ser Ile Arg Leu His Phe Gln Met  
 515 520 525

Glu Gln Ile Val Tyr Cys Gln Asp Gln Val Tyr Arg Gly Ala Leu Gln  
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Lys Val Arg Glu Lys Glu Ala Glu Glu Lys Asn Arg Lys Ser Asn  
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Gln Tyr Phe Leu Ser Ser Pro Ala Pro Ser Ser Asp Pro Ser Ile Ala  
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Glu Ile Phe Gln His Leu Ile Ala Tyr His Gln Glu Val Gly Lys Arg  
 580 585 590

Ile Ser Ser His Ile Pro Leu Ile Ile Gln Phe Phe Ile Leu Arg Thr  
 595 600 605

Phe Gly Gln Gln Leu Gln Lys Ser Met Leu Gln Leu Leu Gln Asn Lys  
 610 615 620

Asp Gln Tyr Asp Trp Leu Leu Arg Glu Arg Ser Asp Thr Ser Asp Lys  
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ctccaggcgg cccgggtct ccagggcacg tctccaggca acgaggacca acctccttcc 180